AMENDMENT TO CLAIMS

Please replace the pending claims with the following listing of claims:

1-20. **(Canceled)**

21. **(Currently Amended)** A fabrication method of the optical fiber using as a core material tellurite glass that has the zero-material dispersion wavelength equal to or greater than 2 μm and has a composition of TeO_2-Bi_2O_3-LO-M_2O-N_2O_3-Q_2O_5, where L is at least one of Zn, Ba and Mg, M is at least one alkaline element selected from Li, Na, K, Rb and Cs, N is at least one of B, La, Ga, Al and Y, and Q is at least one of P and Nb, and components of said tellurite glass are

$50 < TeO_2 < 90$ (mol%)

$1 < Bi_2O_3 < 30$ (mol%) and

$1 < LO + M_2O + N_2O_3 + Q_2O_5 < 50$ (mol%),

wherein said fabrication method of the optical fiber comprises:

a first process of ~~forming a preform by cast~~ molding tellurite glass melt into a mold having a plurality of convex portions which run parallel to a longitudinal axis in succession so as to get a polygon columnar glass preform ~~to become convex on the inner wall~~; and

a second process of inserting said glass preform produced in said first process into a ~~hollow~~ cylindrical jacket tube composed of tellurite glass, and of carrying out fiber drawing under pressure with maintaining or enlarging air holes in a gap between said glass preform and said jacket tube.

22. **(Withdrawn - Currently Amended)** [[A]] The fabrication method of the optical fiber as claimed in claim 21, ~~using as a core material tellurite glass that has the zero-material dispersion wavelength equal to or greater than 2 μm and has a composition of TeO_2-Bi_2O_3-LO-M_2O-N_2O_3-Q_2O_5, where L is at least one of Zn, Ba and Mg, M is at least one alkaline element selected from Li, Na, K, Rb and Cs, N is at least one of B, La, Ga, Al and Y, and Q is at least one of P and Nb, and components of said tellurite glass are~~

~~$50 < TeO_2 < 90$ (mol%)~~

~~$1 < Bi_2O_3 < 30$ (mol%) and~~

~~$1 < LO + M_2O + N_2O_3 + Q_2O_5 < 50$ (mol%), wherein said fabrication method of the optical fiber comprises:~~

[[a]] wherein said first process ~~of forming a preform by cast~~ comprises:

an act of molding tellurite glass melt into a mold having a plurality of convex portions ~~to become convex on the inner wall which is~~ which run parallel to a longitudinal axis in succession on an inner wall, the inner wall being conically enlarged towards a bottom of [[said]] the inner wall; and

an act of molding core glass melt composed of tellurite glass into the mold to fabricate the glass preform whose core glass has conically suction molded by the volume contraction of the cladding glass; and

an act of drawing the molded glass material from the mold by breaking up the mold to get the glass preform which has a plurality of concave portions paralleled in a longitudinal axis on the side surface and a polygon columnar having a plurality of concave portions on the periphery of a shape of cross section from the top of the glass preform to a halfway to a long side of the glass preform and has a conical portion from the halfway to the bottom of the glass preform; and

[[a]] wherein said second process comprises:

an act of cutting out said conical portion from ~~of forming a~~ said glass preform produced by said first process; ~~by injecting glass melt of core glass composed of tellurite glass, and by suction molding the core glass conically by volume contraction of the cladding glass; and~~

an act of inserting the polygon columnar portion into a ~~third process of inserting said glass preform produced by said second process into a hollow~~ cylindrical jacket tube composed of tellurite glass, the polygon columnar portion having a plurality of concave portions paralleled in the longitudinal axis on the side surface; and

an act of carrying out fiber drawing under pressure with maintaining or enlarging air holes in a gap between said glass preform and said jacket tube.

23. **(Withdrawn - Currently Amended)** [[A]] The fabrication method of the optical fiber as claimed in claim 21, ~~using as a core material tellurite glass that has the zero-material dispersion wavelength equal to or greater than 2 μm and has a composition of TeO_2-Bi_2O_3-LO-M_2O-N_2O_3-Q_2O_5, where L is at least one of Zn, Ba and Mg, M is at least one alkaline element selected from Li, Na, K, Rb and Cs, N is at least one of B, La, Ga, Al and Y, and Q is at least one of P and Nb, and components of said tellurite glass are~~

~~$50 < TeO_2 < 90$ (mol%)~~

~~$1 < Bi_2O_3 < 30$ (mol%) and~~

~~$1 < LO + M_2O + N_2O_3 + Q_2O_5 < 50$ (mol%), wherein said fabrication method of the optical fiber comprises:~~

[[a]] wherein said first process ~~of forming a preform by cast~~ comprises:

an act of molding tellurite glass melt into a mold ~~that has~~ having a plurality of convex portions ~~to become convex on the inner wall which is~~ which run parallel to a longitudinal axis in succession on an inner wall, the inner wall being conically enlarged towards a bottom of said inner wall~~, and that has a hole in the bottom of said mold~~ from a halfway to a long side of the inner wall, the bottom of said mold having a hole;

an act of molding core glass melt ~~a second process of forming a glass preform by injecting glass melt of core glass~~ composed of tellurite glass~~, and by suction molding the core glass conically by~~ into the mold to fabricate the glass preform whose core glass has conically suction molded by the volume contraction of the cladding glass and by causing the cladding glass to flow out of said hole volume contraction of the cladding glass and by causing the cladding glass to flow out of said hole; and

an act of drawing the molded glass material from the mold by breaking up the mold to get the glass preform which has a plurality of concave portions paralleled in a longitudinal axis on the side surface and a polygon columnar having a plurality of concave portions on the periphery of a shape of cross section from the top of the glass preform to a halfway to a long side of the glass preform and has a conical portion from the halfway to the bottom of the glass preform; and

~~a third~~ wherein said second process comprises:

an act of cutting out said conical portion from said glass preform produced by said first process;

an act of inserting the polygon columnar portion into a ~~third process of inserting said glass preform produced by said second process into a hollow~~ cylindrical jacket tube composed of tellurite glass, the polygon columnar portion having a plurality of concave portions paralleled in the longitudinal axis on the side surface; and

an act of carrying out fiber drawing under pressure with maintaining or enlarging air holes in a gap between said glass preform and said jacket tube.

24. **(Canceled)**

25. **(Withdrawn)** The fabrication method of the optical fiber as claimed in claim 23, wherein said second process carries out vacuum degassing through said hole to cause said cladding glass to flow out of said hole.

26. **(Withdrawn - Currently Amended)** [[A]] The fabrication method of the optical fiber as claimed in claim 21, ~~using as a core material tellurite glass that has the zero-material dispersion wavelength equal to or greater than 2 μm and has a composition of TeO_2-Bi_2O_3-LO-M_2O-N_2O_3-Q_2O_5, where L is at least one of Zn, Ba and Mg, M is at least one alkaline element selected from Li, Na, K, Rb and Cs, N is at least one of B, La, Ga, Al and Y, and Q is at least one of P and Nb, and components of said tellurite glass are~~

~~$50 < TeO_2 < 90$ (mol%)~~

~~$1 < Bi_2O_3 < 30$ (mol%) and~~

~~$1 < LO + M_2O + N_2O_3 + Q_2O_5 < 50$ (mol%), wherein said fabrication method of the optical fiber comprises:~~

[[a]] wherein said first process ~~of forming a cylindrical glass block by cast molding tellurite glass melt into a mold; a second process of~~ comprises the act of forming a glass preform having air holes by boring holes in a longitudinal direction of said glass block ~~formed in said first process; and~~

~~a third process of inserting said glass preform produced by said second process into a hollow cylindrical jacket tube composed of tellurite glass, and of carrying out fiber drawing under pressure with maintaining or enlarging air holes in a gap between said glass preform and said jacket tube~~.

27. **(Withdrawn - Currently Amended)** [[A]] The fabrication method of the optical fiber as claimed in claim 21, ~~using as a core material tellurite glass that has the zero-material dispersion wavelength equal to or greater than 2 μm and has a composition of TeO_2-Bi_2O_3-LO-M_2O-N_2O_3-Q_2O_5, where L is at least one of Zn, Ba and Mg, M is at least one alkaline element selected from Li, Na, K, Rb and Cs, N is at least one of B, La, Ga, Al and Y, and Q is at least one of P and Nb, and components of said tellurite glass are~~

~~$50 < TeO_2 < 90$ (mol%)~~

~~$1 < Bi_2O_3 < 30$ (mol%) and~~

~~$1 < LO + M_2O + N_2O_3 + Q_2O_5 < 50$ (mol%), wherein said fabrication method of the optical fiber comprises:~~

[[a]] wherein said first process comprises the act of forming a preform having air holes formed by cast molding tellurite glass melt into a mold having a jig including a plurality of cylindrical rodlike pins disposed on a base inside the mold, followed by extracting said jig~~; and~~

~~a second process of inserting said glass preform produced in said first process into a hollow cylindrical jacket tube composed of tellurite glass, and of carrying out fiber drawing under pressure with maintaining or enlarging the air holes in a gap between said glass preform and said jacket tube~~.

28. **(Withdrawn - Currently Amended)** The fabrication method of the optical fiber as claimed in claim 22, wherein said mold has four portions convex which run parallel to a longitudinal axis in succession on the inner wall, and the cladding of said optical fiber has four air holes.

29. **(Withdrawn - Currently Amended)** The fabrication method of the optical fiber as claimed in claim 23, wherein said mold has four portions convex which run parallel to a longitudinal axis in succession on the inner wall, and the cladding of said optical fiber has four air holes.

30. **(New)** The fabrication method of the optical fiber as claimed in claim 21, wherein said first process comprises:

an act of molding tellurite glass melt into a mold having a plurality of convex portions which run parallel to a longitudinal axis in succession; and

an act of drawing a molded glass material from the mold by breaking up the mold to get a polygon columnar glass preform which has a plurality of concave portions on the periphery of a shape of cross section; and

wherein said second process comprises:

an act of inserting said glass preform produced in said first process into a cylindrical jacketing tube composed of tellurite glass; and

an act of carrying out fiber drawing under pressure with maintaining or enlarging air holes in a gap between said glass preform and said jacket tube.

31. **(New)** The fabrication method of the optical fiber as claimed in claim 30, wherein said mold has four portions convex which run parallel to a longitudinal axis in succession on the inner wall, and the cladding of said optical fiber has four air holes.